



February 14, 2014

Mr. David Monti, Chairman
Atlantic Menhaden Advisory Panel
Rhode Island Marine Fisheries Council
State of Rhode Island and Providence Plantations

Re: Proposal to Ban Purse Seining within Rhode Island State Waters

Save The Bay proposes changes in Rhode Island's regulation of the commercial harvest of Atlantic menhaden based on the ecosystem services, ecological functions, and economic value to the public clearly outweighing any benefit gained by their industrial harvest from state waters. We urge you to recommend that the Rhode Island Department of Environmental Management (DEM) ban the commercial purse seine fishery for menhaden in Rhode Island State waters, and recommend to the RI Marine Fisheries Council and the Director of DEM that these changes are implemented before the 2014 season.

We understand that the Atlantic menhaden population is largely controlled by the collective management of the Atlantic states, and that the RI and MA fisheries represent a small proportion of the overall pressure on the species. However, we feel that **the multiple benefits provided by living menhaden easily justify protecting all fish that enter Narragansett Bay for the entire season.** And, because menhaden continually move in and out of the Bay, we feel that also protecting menhaden in our coastal State Waters is necessary to protect the Bay population.

We also understand that current DEM regulations recognize the ecosystem functions of menhaden as forage for certain game fish species, and that a standing biomass of 2,000,000 lbs. has been identified by DEM as sufficient to provide that function for striped bass and bluefish in Narragansett Bay. However, we contend that this regulation underestimates the ecological contributions of menhaden to the Narragansett Bay system, and does not consider several additional ecosystem functions and values that menhaden provide. Additionally, we question whether DEM resources should be spent managing a sector of the menhaden fishery that does not directly benefit the Rhode Island economy or quality of life, and in fact, may diminish both.

Menhaden provide direct critical forage for a host of Bay species, not just for our two most visible game fishes. Menhaden serve a keystone role of converting abundant, planktonic and detrital resources into edible biomass for numerous game and commercial fish species, lobsters, crabs, wading birds, diving ducks, osprey, and seals. These species provide economic, environmental, and cultural benefits for the entire Narragansett Bay community.

Menhaden are an integral component in the food web of Narragansett Bay and may affect important species *indirectly*. For example, as the preferred food source for striped bass, menhaden abundance plays a critical direct role in the abundance and health of this important game fish (Uphoff 2003, Walter et al. 2003). In southern New England, striped bass feed primarily on lobsters and rock crabs during the spring, shifting to menhaden in the summer and fall, when they are abundantly available (Nelson et al. 2006). If menhaden are not readily available, striped bass will focus on other species, including lobsters

(Walter et al. 2003; Nelson et al. 2006). It has been estimated that striped bass consume three times the numbers of lobsters taken by southeastern New England fisheries (Nelson et al. 2006). DEM has reported a precipitous decline in lobster recruitment in Narragansett Bay in recent years, while the Bay lobster fishery has collapsed. Lobster survival may also be *directly* affected by the abundance of menhaden in the Bay, as they feed on menhaden remains dropped by feeding finfish.

Menhaden once spawned in Narragansett Bay. Menhaden spawn in New England coastal waters and embayments. Their eggs and larvae provide food for fish larvae and mollusks, while young of the year menhaden directly graze on phytoplankton blooms and provide preferred forage for a host of fish and wading birds. Juvenile menhaden are also an important food source for commercial and game fish species such as striped bass, bluefish, weakfish, and summer flounder. However, since the mid-1970s, breeding in Narragansett Bay has disappeared (Gibson 2007). It is unclear what the cause of decline was or if it can be reversed. However, it stands to reason that increasing menhaden residence time and densities in the Bay could contribute to any management program aimed at spawning recovery.

Menhaden can remove substantial nitrogen from Narragansett Bay. Durbin and Durbin (1998) estimated that menhaden removed 476,000 lbs. of nitrogen (net) from Narragansett Bay in 1976. That amount is a significant proportion of the nitrogen budget of the Bay. For context, that is over eight times the amount of additional nitrogen that is expected to be removed yearly by a recent \$13-million upgrade to the Narragansett Bay Commission's Bucklin Point facility (NBC, unpublished data). The potential value that living menhaden can provide for nitrogen removal clearly outweighs their market value for bait or reduction.

Menhaden can redistribute nutrients throughout the Bay. Menhaden eat plankton from nutrient rich areas and deposit waste products in other areas. This process can redistribute nutrients, transferring nutrients from nutrient-rich to nutrient-poor surface waters (Durbin and Durbin 1998).

The purse seine fishery provides little or no benefit to the public. In fact, it delivers a net loss. For the last several years, a single purse seine participant has exploited RI waters in Narragansett Bay and has landed its catch in Massachusetts. The gains to the State of RI from licensing fees total about \$300 for this company to remove up to 120,000 lbs of menhaden daily. For this small fee, this fishery has been granted the right to reduce the nutrient removal benefits provided by menhaden, weaken a recreational fishery that contributes nearly \$180 million and 1,200 jobs to the RI economy, and directly diminish the ASMFC allocation available to RI recreational and commercial fishermen to only 78,000 lbs. of menhaden yearly (a direct result of the company fishing in Narragansett Bay and landing in MA). As a result, a single, partial haul from a purse seiner landed in Rhode Island will close the fishery to all for the season. Gibson (2007) cites RIGL 20-3.2-1(e) as a guiding principle of DEM's menhaden management. The law states "*Rhode Island has historically managed its marine fisheries for the benefit of the people of the state, as an ecological asset, and as a source of food, income, and recreation*". The current menhaden purse seine regulations do not effectively promote those benefits, and in fact, harm several.

DEM manages the Narragansett Bay menhaden fishery at RI taxpayer expense; this includes weekly helicopter surveys, and staff time to compile and analyze the data, send out advisories, and report on findings. DEM has reported that this management program is not sustainable (Gibson 2007). Closing the purse seine fishery would substantially reduce the costs of menhaden management.

Most other Atlantic states have banned or restricted purse seining for menhaden in all or parts of their state waters, recognizing the damaging effects of this practice on local ecosystems and communities. New Hampshire, Connecticut, Delaware, Maryland, and North Carolina prohibit purse seining in all state

waters; Massachusetts prohibits mobile gear in Buzzards Bay and seasonally around Cape Cod, and New York bans purse seining in Long Island Sound. Narragansett Bay and our surrounding state waters are no less worthy of such protection.

The health of Narragansett Bay depends on DEM implementing ecosystem-based management.

Aquatic species exist in a complex food web in which the status of every species is dependent on its competitive and predatory interactions with several other species. NOAA has recently recognized the importance of ecosystem interactions in fisheries management in their latest Draft Five-Year Strategic Plan. Menhaden's role as a keystone species is an exemplary testament for prudent ecosystem-based management in marine waters. While the recovery of the larger population of Atlantic menhaden is being pursued through the collective management of the Atlantic states, the Narragansett Bay community will not enjoy the benefits of species recovery unless a framework is put in place to ensure that abundant menhaden remain in Narragansett Bay throughout the season. We urge DEM to choose to manage menhaden for the recovery of Narragansett Bay and for the multiple benefits and services that menhaden provide to the public, and not for the profit of very few at the loss of all others.

We propose that it is DEM's obligation to immediately prohibit purse seining in Rhode Island State waters in the clear interest of the public. Thank you for considering this proposal. Should you have any questions, please do not hesitate to contact me at 272-3540 x116.

Respectfully submitted,



Tom Kutcher
Narragansett Baykeeper

CC:

Janet Coit, Director of DEM

Mark Gibson, Deputy Chief, DEM Division of Fish and Wildlife

Literature Cited

- Durbin, A. G., & Durbin, E. G. (1998). Effects of menhaden predation of plankton populations in Narragansett Bay, Rhode Island. *Estuaries*, 21(3), 449-465.
- Gibson, M. (2007). Estimating seasonal menhaden abundance in Narragansett Bay from purse seine catches, spotter pilot data, and sentinel fishery observations. Rhode Island Department of Environmental Management, Division of Marine Fisheries, Jamestown, RI.
- Nelson, G. A., Chase, B. C., & Stockwell, J. D. (2006). Population consumption of fish and invertebrate prey by striped bass (*Morone saxatilis*) from coastal waters of northern Massachusetts, USA. *J. Northw. Atl. Fish. Sci.*, 36, 111-126.
- Uphoff, J. H. (2003). Predator-prey analysis of striped bass and Atlantic menhaden in upper Chesapeake Bay. *Fisheries Management and Ecology*, 10(5), 313-322.
- Walter, J. F., Overton, A. S., Ferry, K. H., & Mather, M. E. (2003). Atlantic coast feeding habits of striped bass: a synthesis supporting a coast-wide understanding of trophic biology. *Fisheries Management and Ecology*, 10(5), 349-360.